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| 10/760,264 | 01/21/2004 | Kia Silverbrook | RRA11US | 1034 |
| 24011 7590 04/02/2010 SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA | | | | |
| EXAMINER FIDLER, SHELBY LEE | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/760,264

Applicant(s)

SILVERBROOK, KIA

Examiner

SHELBY FIDLER

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/24/2010 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fabbri (US 6068367) in view of Boyd et al. (US 2002/0180835 A1) and Arthur et al. (US 5049898).

Regarding claim 1:

Fabbri discloses a printer cartridge for removable insertion in an inkjet printer, the printer cartridge comprising:

a printing fluid storage (reservoir 16);

a cover molding (metal frame 3 acts to cover the underside of modules 5) defining a recess (one of grooves 24) for receiving a removable ink refill cartridge (main reservoir 9), the cover molding further defining a plurality of passageways providing fluidic access from outside the printer cartridge to the printing fluid storage;

a pagewidth printhead (the set of printing modules 5) in fluid communication with the printing fluid storage (col. 5, lines 9-12), the pagewidth printhead having an elongate array of nozzles (2) extending transverse to a media feed direction (col. 4, lines 38-44 & Fig. 1); and

a first electrical connector (upper PCB 6 shown in Fig. 1) in electrical communication with the printhead (col. 4, lines 52-59) and disposed adjacent a first end (left end shown in Fig. 1) of the elongate array of nozzles (Fig. 1).

Fabbri does not expressly disclose that the cover molding defines a plurality of passageways providing fluidic access from outside the printer cartridge to the printing fluid storage, or that the printer cartridge comprises an authentication device.

However, Boyd et al. disclose a pagewidth printhead cartridge (pen 200) comprising printing fluid storage (channel 54) and a cover molding (bottom layer 72 of substrate 32) to which a removable ink refill reservoir (202) is connected (paragraph 54), wherein the cover molding comprises a plurality of passageways (fluid openings 86, 88) that provide fluidic access from outside of the printer cartridge to a printing fluid storage (paragraph 54). Boyd et al. teach that, by utilizing such a multiple passageway construction, the printhead cartridge may handle multiple colors in a single unitary device (paragraph 56).

Also, Arthur et al. disclose a printer cartridge (12) comprising an authentication device (element of memory 14 storing orifice plate alignment data) for authenticating one or more properties of the printhead with the inkjet printer (col. 4, lines 18-20), wherein the authentication device is connected to the inkjet printer via an electrical connector (Fig. 3). Arthur et al. teach that, by utilizing such an authentication device, the printer cartridge may be able to compensate for any printhead misalignment errors and enable indication of ink information to the user (col. 2, lines 14-32).

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Fabbri's printer cartridge to include multiple passageways in the cover molding, such as suggested by Boyd et al., and to include an authentication device in communication with the electrical connector, such as suggested by Arthur et al.

Examiner notes the additional limitation that "the first authentication device is connected to an authenticated data bus of the inkjet printer." As stated in the previous office action, this limitation only serves to define the inkjet printer and does not appear to limit the structure of the printer cartridge to which the claim is drawn. Therefore, this limitation has not been granted patentable weight.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fabbri as modified by Boyd et al. and Arthur et al., as applied to claim 1 above, and further in view of Inpyn (US 6053598).

Regarding claim 2:

Fabbri's modified printer cartridge comprises all the limitations of claim 1, and **Fabbri also disclose** a second electrical connector (lower PCB 6 shown in Fig. 1) disposed adjacent a second end of the elongate array of nozzles (Fig. 1).

Fabbri's modified printer cartridge does not comprise a second electrical connector that releasably engages with a second corresponding connector of the inkjet printer with a contact force that is parallel to the longitudinal extent of the elongate array of nozzles.

However, Inpyn disclose a printer cartridge (10) that provides electrical connectors (contact pads 50) on each of both ends of an elongate array of nozzles (Fig. 18) such that the electrical connectors engage with corresponding connectors of an inkjet printer with a contact force that is parallel to the longitudinal extent of the elongate array of nozzles such that a longitudinal compressive force acts on the printer cartridge when it is installed in the inkjet printer (Fig. 18). Inpyn teach that this electrical configuration reduces the manufacturing costs by reducing the contact density of each of the contact pads (col. 12, lines 30-35) and occupies a minimal amount of space of the surface of the print head housing (col. 15, lines 48-52).

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to further modify Fabbri's printer cartridge to have the electrical connector configuration suggested by Inpyn.

Regarding claim 3:

Fabbri's modified printer cartridge comprises all the limitations of claim 2, and **Fabbri also disclose** that the printing fluid storage, pagewidth printhead are attached

to a body of the printer cartridge (Fig. 2). **Further, Inpyn disclose** that the first and second electrical connectors are attached to a body of the printer cartridge (Fig. 18).

Therefore, each of the printing fluid storage, pagewidth printhead, and first and second electrical connectors are connected to a body of Fabbri's modified printer cartridge.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of U.S. Patent No. 7258432 B2 in view of Fabbri (US 6068367).

Regarding claim 1:

Claim 4 of U.S. Patent No. 7258432 B2 claims each and every element of instant claim 1, as shown by the table below, **except** that the refill interface defines a recess for receiving the refill unit.

However, Fabbri disclose a printer cartridge (Fig. 2) having a refill interface that includes recesses (grooves 24) for receiving an ink refill reservoir (col. 6, lines 36-41 & Fig. 2). Fabbri teaches that these recesses allow the refill reservoir to couple to the printer cartridge (col. 6, lines 36-41).

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the invention described by claim 4 of U.S. Patent No. 7258432 B2 to include a recess in the refill interface.

| Instant Application 10/760264 | U.S. Patent No. 7258432 B2 |
|--|--|
| <p>Claim 1 – <u>A printer cartridge</u> for removable insertion in an inkjet printer, the printer cartridge comprising: <u>a printing fluid storage</u>; <u>a cover molding</u> defining a recess for receiving a removable ink refill cartridge, the cover molding further defining a <u>plurality of passageways</u> providing fluidic access from outside the printer cartridge to the printing fluid storage; <u>a pagewidth printhead</u> in fluid communication with the printing fluid storage, the pagewidth printhead having an elongate array of nozzles extending transverse to a media feed direction; <u>a first electrical connector</u> in electrical communication with the printhead and disposed adjacent a first end of the elongate array of nozzles; and <u>a first authentication device</u> that authenticates one or more properties of the printhead with the inkjet printer, wherein the first authentication device is connected to an authenticated data bus of the inkjet printer via the first electrical connector.</p> | <p>Claim 1 – <u>A printer cartridge</u> for an inkjet printer including: a cartridge body for mounting the cartridge in the inkjet printer, the cartridge body having <u>printer contacts</u> for electrical connection to an electronic controller within the inkjet printer; a <u>plurality of ink storage reservoirs</u> for sealed storage of different inks, each of the ink storage reservoirs being at least partially defined by a collapsible membrane, and partially defined by rigid wall sections, the rigid wall sections of each of the ink storage reservoirs defining an inlet and an outlet; <u>a printhead</u> in sealed fluid communication with the outlets and electrically connected with the printer contacts for receiving print data and power for operation; <u>a plurality of refill ports</u> in sealed fluid communication with each of the inlets respectively for receiving refill ink; <u>a refill interface</u> positioned on the cartridge body exterior, the refill interface having the refill ports positioned adjacent each other and refill data contacts for connection to complementary contacts on a refill unit when it docks with the refill interface; and <u>an integrated circuit assembly</u> arranged to store information relating to the properties of at least one of the refill ink, the ink stored in the ink storage reservoir and the performance characteristics of the printer cartridge, the integrated circuit assembly being connected to the refill data contacts and the printer contacts, such that the electronic controller adjusts the printhead operation in response to the information provided by the integrated circuit assembly.</p> <p>Claim 4 – <u>A printer cartridge</u> according to claim 1, wherein the printhead is a <u>pagewidth printhead</u>.</p> |

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. Please see the above obviousness rejection that relies on a combination of teachings provided by Fabbri, Boyd et al., and Arthur et al. This combination shows that it would have been obvious to a person of ordinary skill in the art to include into the printer cartridge "a cover molding defining a recess for receiving a removable ink refill cartridge, the cover molding further defining a plurality of passageways providing fluidic access from outside of the printer cartridge to the printing fluid storage."

Conclusion

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Ikkatai et al. (US 6022102) disclose a printer cartridge (61) that includes a recess for receiving a removable ink refill tank (65). Here, the refill interface in the printer cartridge includes a plurality of valves (67) for allowing fluid communication with the ink refill tank (Figs. 8-9).

Communication with the USPTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHELBY FIDLER whose telephone number is (571)272-8455. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on (571) 272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shelby Fidler/
Examiner, Art Unit 2861